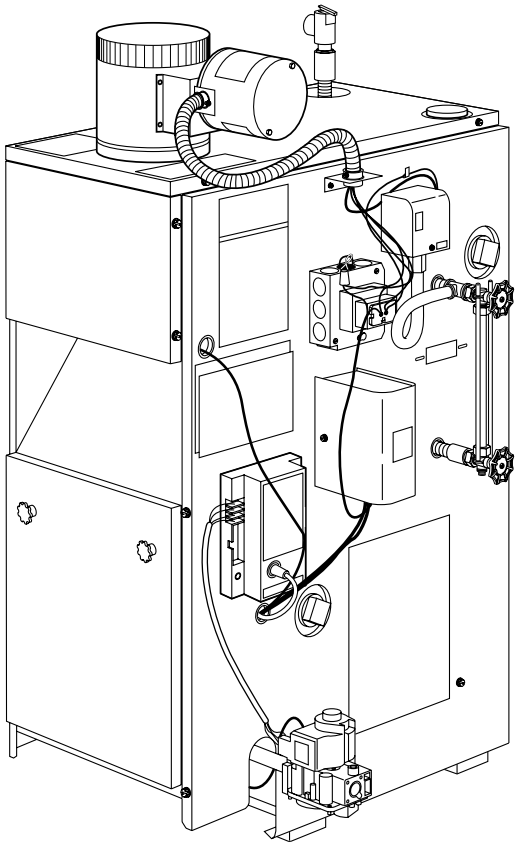
Carrier®
HEATING & COOLING

Product Data

Models BS1 and BS2 Gas-Fired Steam Boilers Series B



MODEL BS1, BS2
Series B

Models BS1 and BS2 Gas-Fired Steam Boilers provide fast heat quietly and economically to assure the finest in hydronic heating.

These boilers provide quality design in a small, compact unit easily installed in a basement, garage, or utility room. They can be installed on a combustible floor when an optional combustible floor base is used.

The BS1 and BS2 model boilers are CSA design certified for use with natural gas and are field convertible for use with propane gas with a factory authorized accessory conversion kit.

FEATURES

Range of Capacities — Sizes 75,000 through 299,000 input Btuh are available.

Completely Packaged — Each boiler is completely assembled, including all controls (except room thermostat). All necessary wiring is factory installed. The boiler is ready for gas, water, room thermostat, and electrical connections as shipped.

Thermal-Pin, Cast-Iron Sections — These sections speed heat transfer from the flue gases to the boiler water, with faster thermostat response, providing greater comfort and economy. Maximum heat is produced at a lower level on the thermal-pin sections, leading to peak efficiency.

Titanium Composite Burners — Provide quiet operation, corrosion resistance and improved combustion efficiency. Propane convertible – with accessory kit.

Controls — An automatic gas valve and continuous pilot or intermittent pilot provide quiet, dependable operation of the burners. Factory-installed safety components assure protection against overheating, pressure buildup, and low-water operation.

Insulated Casing — The casing is fully insulated with fiberglass for maximum operating efficiency and economy.

Automatic Vent Damper — BS1 and BS2 boilers are CSA design certified for use with a factory-supplied automatic vent damper.

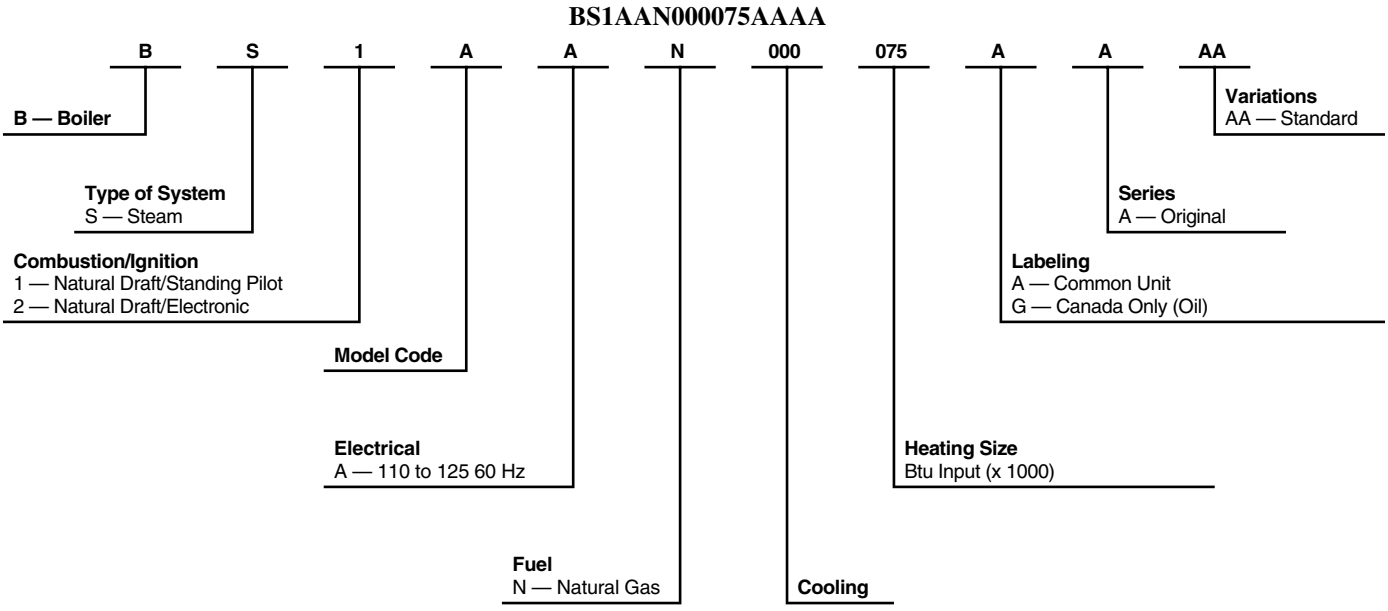
Sections Tested — Each section is hydrostatically tested to 50 psig. Individual sections are tested to 125 psig at factory. Assembled sections are tested to 75 psig at the factory. Maximum allowable working pressure is 50 psig. The maximum allowable pressure is 15 psig for steam boilers.

Warranty — The cast-iron sections are covered by a non-prorated 12-year warranty on the entire assembly. All other parts are covered by a 5-year limited warranty.

ASME

Copyright 2005 Carrier Corporation

Model number nomenclature

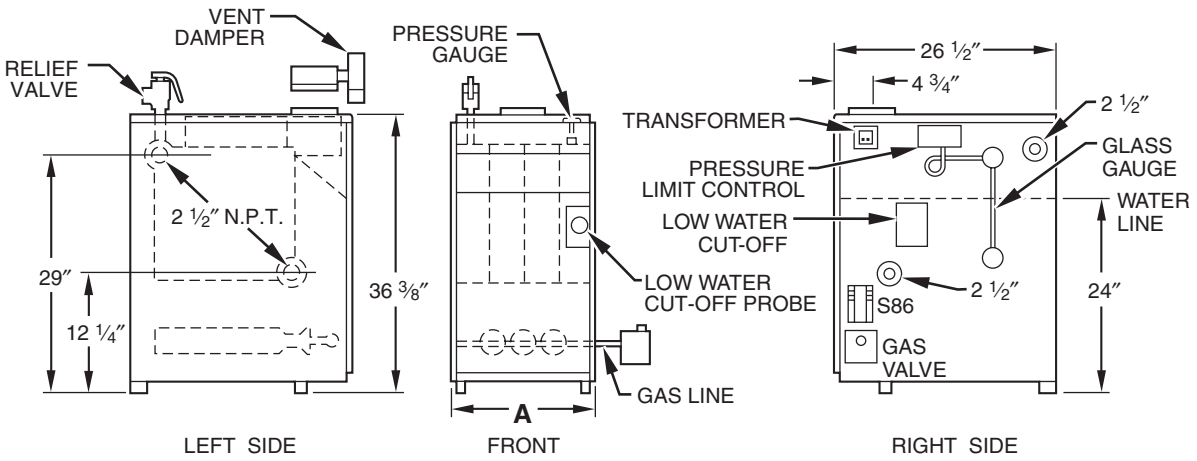


Boiler accessories

BS1/BS2	
DESCRIPTION	**PART NO.**
Combustible Floor Base (2 thru 6 section models)	KBASB0301DNK
Combustible Floor Base (6 thru 7 section models)	KBASB0401DNK
Gas Conversion Kit Natural to Propane (3 section, BS1/2-075)	KBANP0301DNK
Gas Conversion Kit Natural to Propane (4 section, BS1/2-112)	KBANP0401DNK
Gas Conversion Kit Natural to Propane (5 section, BS1/2-150)	KBANP0501DNK
Gas Conversion Kit Natural to Propane (6 section, BS1/2-187)	KBANP0601DNK
Gas Conversion Kit Natural to Propane (7 section, BS1/2-225)	KBANP0701DNK
Gas Conversion Kit Natural to Propane (8 section, BS1/2-262)	KBANP0801DNK
Gas Conversion Kit Natural to Propane (9 section, BS1/2-299)	KBANP0901DNK
Gas Conversion Kit Propane to Natural (3 section, BS1/2-075)	KBAPN0301DNK
Gas Conversion Kit Propane to Natural (4 section, BS1/2-112)	KBAPN0401DNK
Gas Conversion Kit Propane to Natural (5 section, BS1/2-150)	KBAPN0501DNK
Gas Conversion Kit Propane to Natural (6 section, BS1/2-187)	KBAPN0601DNK
Gas Conversion Kit Propane to Natural (7 section, BS1/2-225)	KBAPN0701DNK
Gas Conversion Kit Propane to Natural (8 section, BS1/2-212)	KBAPN0801DNK
Gas Conversion Kit Propane to Natural (9 section, BS1/2-299)	KBAPN0901DNK
NOTE: There was never a Natural to Propane conversion kit for BW/BS boilers prior to 1799V.	

Note: Accessory High Limit Control is a strap-on aquastat used as an auxiliary limit or reverse acting circulator control.

Dimensions — Models BS1 and BS2



A04206

DIMENSIONS (In.)

UNIT SIZE	A	VENT DIA
075	11-1/4	5
112	14-1/2	6
150	17-3/4	6
187	21	7
225	24-1/4	7
262	27-1/2	7
299	30-3/4	7

CLEARANCES (In.)

RIGHT SIDE	6*
LEFT SIDE	6
TOP	6
BACK	6
FRONT	6*

* Service clearance requirement 24 in.

Physical data

UNIT SIZE		075	112	150	187	225	262	299
GENERAL DATA								
Sections — Fine Grain Cast Iron	No.	3	4	5	6	7	8	9
Burners — Stainless/Titanium Alloy	No.	2	3	4	5	6	7	8
Burners — Orifice Drill Size	Natural	34	34	34	34	34	34	34
GAS CONTROLS — STANDING PILOT (BS1)								
Gas Valve		Honeywell						
Inlet Size	In.	1/2 FPT					3/4 FPT	
Pilot Assembly		Honeywell						
GAS CONTROLS — INTERMITTENT PILOT (BS2)								
Gas Valve		Honeywell						
Inlet Size	In.	1/2 FPT					3/4 FPT	
Pilot Assembly		Honeywell						
Spark Generator		Honeywell /UTEC						
CONTROLS								
Low-Water Cutoff		McDonnell Miller						
Pressuretrol	Psig	0–15						
Pressure Relief Valve	Setting	15 Psig						
	Capacity	400 lb/hr						
Pressure Retard Gauge Range	Psig	0–30						
Drain Cock	In.	3/4						
Vent Damper*	In.	5	6		7			

*Factory authorized and listed, field installed.

Electrical data

ALL MODELS	
Voltage—Hertz—Phase	115 — 60 — 1
Minimum Branch Circuit Wire Size (AWG)	14
Maximum Fuse Size or CKT BKR (Amps)‡	15
Control Circuit Power Available	40va@ 24v

‡Time-delay type is recommended

Performance data*

UNIT	GAS TYPE	NUMBER OF SECTIONS	MAX INPUT (BTUH)	HEATING CAPACITY (BTUH)	NET RATING		AFUE % (W/DAMPER)	APPROX SHIP. WT (Lb)
					Btuh	Sq Ft		
BS1AAN075	Natural	3	75,000	62,000	47,000	196	81.1	256
BS1AAN112	Natural	4	112,500	91,000	68,000	283	78.8	404
BS1AAN150	Natural	5	150,000	122,000	92,000	383	79.2	483
BS1AAN187	Natural	6	187,500	153,000	115,000	479	79.6	564
BS1AAN225	Natural	7	225,000	183,000	137,000	571	80.1	649
BS1AAN262	Natural	8	262,500	214,000	161,000	671	80.5	719
BS1AAN299	Natural	9	299,000	245,000	184,000	767	80.9	800
BS2AAN075	Natural	3	75,000	62,000	47,000	196	82.7	256
BS2AAN112	Natural	4	112,500	91,000	66,000	283	80.4	404
BS2AAN150	Natural	5	150,000	122,000	92,000	383	80.6	483
BS2AAN187	Natural	6	187,500	153,000	115,000	479	80.9	564
BS2AAN225	Natural	7	225,000	183,000	137,000	575	81.1	649
BS2AAN262	Natural	8	262,500	214,000	161,000	671	81.3	719
BS2AAN299	Natural	9	299,000	245,000	184,000	767	81.5	800

* Ratings are for altitudes to 2000 ft. Ratings for units for altitudes over 2000 ft are 4% less for each 1000 ft above sea level. Ratings in sq ft are computed at 240 Btuh/sq ft for steam boilers.